

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/008185 A3

(51) International Patent Classification⁷: **G02B 3/00**,
13/22, 13/06, 17/00, 13/16, H04N 7/00, 7/18, 9/47, 5/225

(21) International Application Number:
PCT/IL2003/000558

(22) International Filing Date: 3 July 2003 (03.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
150746 15 July 2002 (15.07.2002) IL

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
15 April 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: OPTICAL LENS PROVIDING OMNI-DIRECTIONAL COVERAGE AND ILLUMINATION

(57) Abstract: The invention presents a wide-angle imaging assembly which comprises a main lens produced from an aspheric optical block. The aspheric optical block comprises a vertical axis of symmetry; a transparent upper surface, at least part of which is capable of reflecting rays that impinge upon it from the interior of the optical block; a transparent perimeter surface; and a transparent lower surface. The optical block is fabricated from material selected to enable optical transmittance of a specific spectral range. Light rays in the specific spectral range originating in a first scene, having a 360 degrees panoramic perimeter, are refracted by the transparent perimeter surface, enter the optical block, are then reflected by the upper surface towards the transparent lower surface, where they are then refracted by the transparent lower surface, and exit through it.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL03/00558

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G02B 3/00,13/22,13/06,17/00,13/16; H04N 7/00,7/18,9/47,5/225

US CL : 359/662,664,725,726,727; 348/36,39,143,335

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 359/662,664,725,726,727; 348/36,39,143,335

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/0010555 A1 (DRISCOLL JR.) 02 August 2001 (02.08.2001), see sections 2, 10, 68-70	1-5
Y		6-10
Y,P	US 6,424,377 B1 (DRISCOLL, JR. et al.) 23 July 2002 (23.07.2002), see col. 4-col. 5.	6-10

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☐ See patent family annex.

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"&"

document member of the same patent family

Date of the actual completion of the international search

01 March 2004 (01.03.2004)

Date of mailing of the international search report

09 MAR 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US

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